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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/669,120	09/22/2003	J. Lyell Ginter	P/3474-50 REISSUE	8754

2352 7590 04/08/2008

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EXAMINER	
FREAY, CHARLES GRANT	
ART UNIT	PAPER NUMBER
3746	

MAIL DATE	DELIVERY MODE
04/08/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/669,120	GINTER ET AL.	
	Examiner	Art Unit	
	Charles G. Freay	3746	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 September 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-26,28-66 and 75-284* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-26,28-66 and 75-284* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *9/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to the preliminary amendment of October 30, 2006.

The current application is a Reissue application of U.S. Patent Application Serial No. 09/042,231, which issued as U.S. Pat. No. 6,289,666. A restriction was made in the ('231) application between a power generating apparatus and a method for continuously providing working fluid to the exit of a combustion chamber. U. S. Patent Application Serial No. 09/645986 (Abandoned) was filed as a Divisional application to the ('231) application. U. S. Patent Application Serial No. 10/161,159 (now USPN 6,564,556) was filed as a Continuation of the ('986) application. U. S. Patent Application Serial No. 10/713,899 was filed as a Continuation-In-Part application of the ('159) application and U.S. Patent Application Serial No. 11049197 was filed as a Continuation of the ('899) application. Each of the ('899) and ('197) applications are now abandoned.

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 1-26, 28-61, 62-66 and 75-85 drawn to a power generating system and a method of operating a power generating system, classified in class 60, subclass 39.53.

II. Claims 86-284, drawn to an apparatus and a method of converting energy in a flow of fuel and air using a combustor, classified in class 431, subclass 4.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combustor could operate without regard to a particular concentration of a pollutant. The subcombination has separate utility such as for injecting steam downhole into a petroleum production well.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Restriction for examination purposes as indicated is proper because all these inventions listed in this action are independent or distinct for the reasons given above and there would be a serious search and examination burden if restriction were not required because one or more of the following reasons apply:

(a) the inventions have acquired a separate status in the art in view of their different classification;

(b) the inventions have acquired a separate status in the art due to their recognized divergent subject matter;

(c) the inventions require a different field of search (for example, searching different classes/subclasses or electronic resources, or employing different search queries);

(d) the prior art applicable to one invention would not likely be applicable to another invention;

(e) the inventions are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

Newly submitted claims 86-284 are directed to an invention that is independent or distinct from the invention originally claimed for the reasons set forth above.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 86-284 are withdrawn from

consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Claim Objections

Claims 28 and 88 are objected to because of the following informalities: 28 depends upon canceled claim 27 and claim 88 depends upon claim 29 but should depend upon claim 86. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-26, 28-51 and 76 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Each of independent claims 1, 29 and 76 set forth the independent control of the amount of water, fuel and liquid injected. However, the disclosure makes it clear that the control of the air is by the structure of the combustor (see Fig. 2). Furthermore, as shown in Fig. 1 the combustion controller (100) only has output lines to the fuel control (30) and the water control (4). Thus there is no independent control of the air.

The amount of air (and also the pressure and temperature) and controlled by operation of the compressor and turbine which are controlled by the fuel amount.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-26, 28-51, and 76-85 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In each of claims 1, 29 and 76 the limitations of the compressed air having a pressure of "at least about four atmospheres" is vague and indefinite. This limitation represents a range within a range and a person of ordinary skill would not be able to determine to lower limit of compression permitted by the claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 2, 5-8, 15, 17-23, 29, 33, 41, 43-47, 51, and 77-79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maslak (USPN 4,928,487) in view of Carr (USPN 3,048,967).

Maslak discloses a power plant including a compressor (12), combustor (18) and turbine (24), air control means (the combustor geometry provided by the air introduction lines 16 and 20). A controller (48) which independently adjusts fuel flow (58) and water flow (44) to control NOx emissions. Maslak does not set forth that the air is compressed to at least about four atmospheres. Carr discloses a gas turbine system with water (col. 1 line 60) injection into a combustor (12) which is done in order to reduce pollutants such as smog. The air is compressed to 4 to 12 atmospheres. At the time of the invention it would have been obvious to one of ordinary skill in the art to have a compression ratio in the Maslak gas turbine which is similar to the Carr system in order to provide proper combustion and drive conditions for the turbine engine.

With regards to claims 15 and 41, the examiner notes that when the gas turbine is driving a load at a constant rate the compressed air and the fuel amounts would be at

a constant level and it would be obvious/inherent that the temperature control is done by varying the injected water amount.

Claims 3, 4 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maslak in view of Carr as applied to claims 1 and 29 above, and further in view of Wyman (USPN 2,469,679).

As set forth above Maslak discloses the invention substantially as claimed but does not disclose a condenser in the turbine exhaust. Wyman discloses a gas turbine having a water injection (54) in the combustor and having a condenser (61,62, 63, 64) in the turbine exhaust. At the time of the invention it would have been obvious to one of ordinary skill in the art to utilize a condenser in the turbine exhaust as taught by Wyman in order to recapture water for injection into the combustor and thus reduce the amount of water used in the process.

Claims 16, 24, 30, 42, 81, 83 and 84 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maslak in view of Carr as applied to claims 1 and 29 above, and further in view of Wyman (USPN 4,094,42).

As set forth above Maslak discloses the invention substantially as claimed but does not disclose the fuel to air ratio being stoiciometric, the fuel being propane, an igniter or a temperature sensor in the combustor. Pferffle discloses a gas turbine system which has fuel control in order to limit the NOx produced in response to temperature (see sensors 40, 42) in the combustor (note col. 1 lines 36-54, col. 2 lines15-20, the first

paragraph of col. 3 and the sentence spanning cols. 3 and 4). The combustion process is done at stoiciometric levels and there is an igniter (44). The fuel is propane (see the fourth full paragraph of col. 7). At the time of the invention it would have been obvious to one of ordinary skill in the art to use the fuel and fuel control and conditions as set forth in Pfefferle in the Maslak system as a well known combustion arrangement and method which will reduce NOx.

Claim 82 is rejected under 35 U.S.C. 103(a) as being unpatentable over Maslak in view of Carr as applied to claim 1 above, and further in view of Kidd (USPN 4,733,527).

As set forth above Maslak in view of Carr discloses the invention substantially as claimed but does not disclose a second work engine. Kidd discloses a similar gas turbine system having separate and independent fuel and water injection control where the exhaust from the gas turbine is fed to first (22A) and second (22B) work engines. At the time of the invention it would have been obvious to one of ordinary skill in the art to utilize two work engines as taught by Kidd in the Mazlak gas turbine system in order to provide a means for driving the compressor and also a means for driving a load such as a generator for power production.

Claim Rejections - 35 U.S.C. 251

The reissue oath/declaration filed with this application is defective (see 37 CFR 1.175 and MPEP § 1414) because of the following:

Claims 52-61, 64-66, 75 and 86-284 are rejected under 35 U.S.C. 251 as being broadened in a reissue application filed outside the two year statutory period. U. S. Patent 6,288,666 issued as a patent on September 18, 2001. The current application was filed September 22, 2003. Each of amended claims 4, 14, 18, 21, 23, 30, 43, 46, 52-62, 64-66 and 86, and each of newly presented claims 86-284, present claims which are broader, in at least one respect, than any claim issued in the original patent. A claim is broader in scope than the original claims if it contains within its scope any conceivable product or process which would not have infringed the original patent. A claim is broadened if it is broader in any one respect even though it may be narrower in other respects.

While new claims 86-284 have been withdrawn from further consideration as set forth above, the examiner has addressed them here and in the rejection set forth below, purely in view of 35 USC 251 because of their clearly understood broader scope with respect to the claims of the original patent.

The reissue claims must be for the same invention as that of the original patent.

With regards to the claims of Group II (claims 86-284) the claims of this group correspond to claims set forth in the continuity chain of applications stemming from the

filing of Divisional Application 09/645,986. In particular, new claims 86-284 of the current application correspond in scope and subject matter to claims 1 and 2 of the ('899) application and claims 1-112 of the ('197) application. By restriction and prosecution history the invention set forth in new claims 86-284 of the present application have been restricted from the claims originally prosecuted and issued in the parent application (U. S. Patent Application Serial No. 09/042,231). Additionally, the examiner notes that a computer word search of U.S. Pat. No. 6,289,666, from which this application is a reissue, does not return a result when searching for the term "concentration". Since a primary feature of independent claims 86 and 161 includes control to result in a particular concentration of a selected pollutant, it appears these withdrawn claims may include new matter.

Claims 86-284 should properly be filed as a reissue stemming from one of the applications in the divisional chain of applications originating with the Divisional Application 09/645,986.

The reissue oath/declaration filed with this application is defective because it fails to identify at least one error which is relied upon to support the reissue application. See 37 CFR 1.175(a)(1) and MPEP § 1414.

As set forth above claims 1-26, 28-51, 62, 63 and 76-85 are the elected claims remaining for prosecution which have not been broadened by the preliminary amendment of September 22, 2003. The independent claims (claims 1, 29 and 76) set forth in the elected group of claims have not been amended and only dependant claims

have been added to these claims. The failure to file the newly presented dependant claims is not considered to be a reissuable error that is correctable under 35 USC 251.

Claims 1-16, 28-66 and 75-284 rejected as being based upon a defective reissue declaration under 35 U.S.C. 251 as set forth above. See 37 CFR 1.175.

The nature of the defect(s) in the declaration is set forth in the discussion above in this Office action.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles G. Freay whose telephone number is 571-272-4827. The examiner can normally be reached on Monday through Friday 8:30 A.M. to 5:30 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on 571-272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles G Freay/
Primary Examiner
Art Unit 3746

CGF
April 3, 2008